

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 8

REMARKS

I. Status of the Application

Claims 1-40 were filed in the original application.

In the Office Action, the Examiner:

- (a) acknowledged Applicant's election without traverse of Group 1 (claims 1-19);
- (b) withdrew claims 20-40 from further consideration pursuant to 37 CFR § 1.142(b)

as being drawn to a nonelected invention;

- (c) rejected claims 1, 2, 4, 5, 9 and 12-19 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,220,305 to Johnson et al. ("Johnson et al.");
- (d) rejected claims 1-7 and 9-19 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson et al. and further in view of U.S. Patent No. 6,403,659 to Boyer et al. ("Boyer et al.");
- (e) rejected claims 3 and 10 under 35 U.S.C. §103(a) as allegedly being unpatentable over Johnson et al. and further in view of the IDS article entitled "Polycyclic aromatic hydrocarbons (PAH's) in pitches used in the aluminum industry" by Mirtchi et al. ("IDS Mirtchi");
- (f) rejected claims 3 and 10 under 35 U.S.C. §103(a) as allegedly being unpatentable over Johnson et al. in view of Boyer et al. and further in view of IDS Mirtchi; and
- (g) rejected claim 8 under 35 U.S.C. §103(a) as allegedly being unpatentable over Johnson et al. in view of Boyer et al. and further in view of U.S. Patent No. 3,607,515 to Pennie ("Pennie").

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 9

In this response, Applicant acknowledges the withdrawal of claims 20-40 pursuant to the interview with the Examiner on September 20, 2005. Applicant respectfully submits that the following remarks incorporated herein overcome the Examiner's rejections of the application.

II. No New Matter Is Introduced by Way of Amendment

As discussed herein, Applicant withdraws claims 20-40. No other amendments are being made to the specification, abstract, and/or claims. Therefore, Applicant respectfully submits that no new matter is introduced by way of amendment to the present application.

III. Applicant's election of Claims 1-19

The Examiner acknowledged Applicant's election without traverse of Group 1, claims 1-19, pursuant to the interview with the Examiner on September 20, 2005. Applicant hereby confirms that it elects, without traverse, Group 1 (claims 1-19), and respectfully requests the Examiner's continued consideration of these elected claims.

IV. The Rejection of Claims 1, 2, 4, 5, 9 and 12-19 under 35 U.S.C. § 102(b) as Allegedly Being Anticipated by Johnson et al. is Overcome

In the Office Action, the Examiner rejected claims 1, 2, 4, 5, 9 and 12-19 under 35 U.S.C. § 102(b) as allegedly being anticipated by Johnson et al. Applicant respectfully submits that the rejection of claims 1, 2, 4, 5, 9 and 12-19 is overcome because claims 1, 2, 4, 5, 9 and 12-19 are patentably distinguishable over Johnson et al. A rejection under 35 U.S.C. §102(b) can be overcome by "persuasively arguing that the claims are patentably distinguishable from the prior

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 10

art." MPEP § 706.02(b). Omission of any claimed element, no matter how insubstantial, is grounds for traversing a rejection based on 35 U.S.C. § 102. *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983).

The Examiner alleges that Johnson et al. discloses "an enamel base comprising a blend of a coal tar pitch (i.e. applicants' "bituminous base"), a coal tar oil (i.e. applicants' "petroleum base") and coal, said enamel base having a softening point meeting applicant's claimed limitations (col. 4, lines 30-45)" (Office Action, page 2). Applicant respectfully submits that Johnson et al. does not teach, suggest, or disclose a "petroleum base" as claimed in Applicant's present application.

a. The Invention of Johnson et al.

Johnson et al. discloses the process of coating pipes by "utilizing a primer coating consisting essentially of an epoxy resin material and a top coating consisting essentially of a coal tar enamel" (col. 1, lines 51-53). Johnson et al. further discloses coal tar enamel preparations, stating that "a coal tar enamel is prepared by plasticizing coal tar pitch, for example with coal and a coal tar oil, and also adding conventional fillers to the plasticized pitch such as talc, slate and/or mica cell" (col. 4, lines 30-34). In summary, Johnson et al. teaches the use of a wholly coal-based enamel as the second product used to coat pipe.

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 11

b. Applicant's Invention

Applicant's present application (United States Patent Application Publication No. US 2005/0095378 A1 ("Application")) discloses an enamel base that "is a substantially homogeneous blend of at least one bituminous base, at least one petroleum base and coal" (Application, paragraph 0005). Such an enamel can be used to prepare "a coated metal article having a surface coated with a tar-based enamel such as for example a steel pipe or steel tank" (Application, paragraph 0009). The present Application also refers to the specific ingredients, stating the following:

[T]he terms bituminous base and petroleum base are well known and refer to products resulting from further processing of raw coal tar and from the rectification of petroleum products, respectively. Examples of bituminous bases include, but are not limited to, coal tar, coal tar pitch, refined coal tar, roofing tar and related materials. Examples of petroleum bases include, but are not limited to, cat cracked clarified oil (a soft petroleum pitch), slurry oil, decant oil, aromatic petroleum oil and related materials.

(Application, paragraph 0015)

In summary, the present Application provides for an enamel, comprising a bituminous base, a petroleum base, and coal, that can be used to coat metal surfaces.

c. Johnson et al. Does Not Disclose, Teach, Or Suggest "a Petroleum Base"

A prior art patent, publication, or event is for the same "invention," as that word is used in 35 U.S.C. § 102, and therefore anticipating, if the prior art patent, publication or event discloses each and every limitation found in the claims, either expressly or inherently. *Rockwell Intern. Corp. v. U.S.*, 147 F.3d 1358, 1363 (Fed. Cir. 1998); *Electro Med Sys. S.A. v. Cooper Life*

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 12

Sciences, 34 F.3d 1048, 1052 (Fed. Cir. 1994). Each claim limitation must be found in a single prior art reference; references cannot be combined under 35 U.S.C. § 102. *Apple Computer, Inc. v. Articulate Systems, Inc.*, 234 F.3d 14, 20 (Fed. Cir. 2000). Where a reference is alleged to inherently disclose a claim element, the missing element must necessarily be present in the cited reference and that it be so recognized by those of skill in the art. It is not enough that the missing element is possibly or probably present. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999).

Applicant respectfully submits that Johnson et al. does not teach, suggest, or disclose an enamel base comprising a "petroleum base" as claimed in Applicant's claims 1 and 9. Applicant respectfully submits that the "coal tar oil" as disclosed in Johnson et al. is different from the "petroleum base" claimed in Applicant's claims 1 and 9. As discussed above, bituminous bases may include "coal tar, coal tar pitch, refined coal tar, roofing tar and related materials," while examples of petroleum bases may include "cat cracked clarified oil (a soft petroleum pitch), slurry oil, decant oil, aromatic petroleum oil and related materials" (Application, paragraph 0015). Johnson et al. specifically teaches "coal tar oil," of which Applicant respectfully submits falls under the bituminous or coal-related category, and not under the "petroleum" category. Simply put, the coal tar oil as referenced in Johnson et al. is not a petroleum base as referenced in the present Application.

To further distinguish the coal tar oil of Johnson et al. and the petroleum base of the present Application, Applicant respectfully submits the following reference information. The *Introduction to Carbon Technologies*, Editors H. Marsh, E.A. Heintz and F. Rodriguez-Reinoso, Chapter 8: "Pitch Characterization for Industrial Applications" by Maximilan Zander, states that

Commissioner for Patents

Serial No. 10/700,184

Response Date January 6, 2006

Reply to Office Action dated October 7, 2005

Page 13

"coal-tar pitch is a residue produced by distillation from heat-treatment of coal tar (coke oven tar) while petroleum pitch is a residue from heat-treatment and distillation of petroleum fractions" (page 425). Section 2 of this reference chapter (entitled "Coal-Tar Pitch") provides further comment on coal-tar pitch, stating that "[t]he raw material for the production of coal-tar pitch, *i.e.*, crude coal-tar, is obtained as a by-product of metallurgical coke production" (page 425). Section 3 of this reference (entitled "Petroleum Pitch") describes the process of generating petroleum pitch, stating the following:

Examples of feedstocks that can be used to produce a petroleum pitch include by-product aromatic extracts from lube-oil processes, asphaltic residues from vacuum stills and hard asphalt from solvent deasphalting units, but the currently most important feedstocks are decant oil from fluid catalytic cracking units and the tar-like bottoms (pyrolysis tar) from steam-cracking of naphtha and gas oils for the manufacture of ethylene. Pitch can be produced from these feedstocks by thermal treatment, vacuum or steam stripping, oxidation, distillation or a combination of these processes.

(page 433)

In summary, this additional reference further distinguishes coal-tar pitch as being a product of coal tar, and distinguishes petroleum pitch as a product of petroleum fractions. Applicant respectfully submits that there are two "families" of products discussed here, one being the coal "family" and the other being the "petroleum" family, which are different types of products as described above.

As such, Johnson et al. does not disclose each and every element of the claims of the present invention, as a "petroleum base" as claimed in the present Application is not disclosed in Johnson et al. Therefore, Applicant respectfully submits that claims 1, 2, 4, 5, 9 and 12-19 are

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 14

patentable, and the rejection of claims 1, 2, 4, 5, 9 and 12-19 under 35 U.S.C. § 102(b) as being anticipated by Johnson et al. is overcome.

d. Claim 1 is not anticipated by Johnson et al.

As discussed in detail above, Applicants' claim 1 is not anticipated by Johnson et al. because Johnson et al. does not disclose, teach, or suggest an enamel base comprising a "petroleum base" as claimed in Applicant's claim 1. As such, Applicant respectfully submits that claim 1 is patentable, and the rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Johnson et al. is overcome.

e. Claims 2, 4, and 5 are Not Anticipated by Johnson et al.

Because Johnson et al. does not anticipate claim 1, and because claims 2, 4, and 5 depend from allowable claim 1, it is respectfully submitted that claims 2, 4, and 5 are allowable (MPEP § 608.01(n)), and the rejection of claims 2, 4, and 5 under 35 U.S.C. § 102(b) as being anticipated by Johnson et al. is overcome.

f. Claim 9 is not anticipated by Johnson et al.

Applicant's claim 9 is not anticipated by Johnson et al. because, as discussed above regarding Applicant's claim 1, Johnson et al. does not disclose, teach, or suggest a an enamel base comprising a "petroleum base" as claimed in Applicant's claim 9. As such, Applicant

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 15

respectfully submits that claim 9 is patentable, and the rejection of claim 9 under 35 U.S.C. § 102(b) as being anticipated by Johnson et al. is overcome.

g. Claims 12-19 are Not Anticipated by Johnson et al.

Because Johnson et al. does not anticipate claim 9, and because claims 12-19 depend from allowable base claim 9, it is respectfully submitted that claims 12-19 are allowable (MPEP § 608.01(n)), and the rejection of claims 12-19 under 35 U.S.C. § 102(b) as being anticipated by Johnson et al. is overcome.

V. The Rejection of Claims 1-7 and 9-19 under 35 U.S.C. § 103(a) as Allegedly Being Unpatentable Over Johnson et al. and Further in View of Boyer et al. is Overcome

In the Office Action, the Examiner rejected claims 1-7 and 9-19 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson et al. and further in view of Boyer et al. Three factual determinations are required when evaluating whether or not a claimed invention is to be considered as obvious over the prior art: (i) the scope and content of the prior art; (ii) the differences between the prior art and the claims at issue; and (iii) the level of ordinary skill in the pertinent art. *Graham v. John Deere*, 383 U.S. 1, 17 (1966). As such, three criteria must be met to establish a *prima facie* case of obviousness: (i) there must be some suggestion or motivation to combine the teachings of two or more prior art references; (ii) there must be a reasonable expectation of success; and (iii) "all of the claim limitations must be taught or suggested by the prior art." MPEP §§ 2142, 2143 and 2143.03 (citing *In re Royka*, 490 F.2d 981 (C.C.P.A. 1974); see also *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991)). Further, "[i]f an independent claim is not

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 16

obvious under 35 U.S.C. § 103, then any claim depending therefrom is not obvious." MPEP § 2143.03 (citing *In Re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988)). Applicant respectfully submits that Johnson et al. further in view of Boyer et al. does not disclose, teach, or suggest all of the limitations claimed in Applicant's claims 1-7 and 9-19. Additionally, Applicant respectfully submits that there is no suggestion or motivation to combine Johnson et al. and Boyer et al., and that Boyer et al. itself is non-analogous to the present invention.

a. The Invention of Johnson et al.

Johnson et al., as previously discussed, discloses the process of coating pipes by "utilizing a primer coating consisting essentially of an epoxy resin material and a top coating consisting essentially of a coal tar enamel" (col. 1, lines 51-53). Johnson et al. further discloses coal tar enamel preparations, stating that "a coal tar enamel is prepared by plasticizing coal tar pitch, for example with coal and a coal tar oil, and also adding conventional fillers to the plasticized pitch such as talc, slate and/or mica cell" (col. 4, lines 30-34). In summary, Johnson et al. teaches the use of a wholly coal-based enamel as the second product used to coat pipe.

b. The Invention of Boyer et al.

Boyer et al. discloses "an asphalt based sealer for asphalt pavement or metal surfaces" (col. 1, lines 12-13). Boyer et al. further states that "[t]here are two basic types of driveway or pavement sealer – coal tar based and asphalt based" (col. 1, lines 15-16). Boyer et al. specifically distinguishes "coal tar pitch" from "petroleum pitch," stating that "[c]oal tar pitch is

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 17

the product of thermal or destructive distillation of coal," while "[p]etroleum pitch is a residue from heat treatment and distillation of petroleum fractions" (col. 3, lines 38-41). In summary, Boyer et al. discloses an asphalt based driveway sealer.

c. Johnson et al. and Boyer et al. do not Teach or Suggest All of the Claim Limitations of the Present Invention

Applicant respectfully submits that neither Johnson et al. nor Boyer et al. discuss or make mention of an enamel base comprising a bituminous base, a petroleum base, and coal, as claimed in Applicant's present claims 1 and 9. Applicant respectfully submits that nothing in Johnson et al. supports the use of a cut-back oil as disclosed in Boyer et al. Rather, Johnson et al. discloses, teaches and suggests an enamel composition of coal tar pitch, coal tar oil, and coal, without reference to any sort of petroleum base in the formulation. While Boyer et al. does teach the use of a cut-back oil, Applicant respectfully submits that the use of a cut-back oil in Boyer et al. is to prepare a driveway sealer product and is not used in any way to prepare coal-based enamel product for metal coating. Further, Applicant respectfully submits that the cut-back oil of Boyer et al. is used as a dilutant, while the petroleum base of the present Application is a specific reagent of the enamel formulation. As discussed below, "sealers" are different from "enamels," and Applicant respectfully submits that the combination of a cut-back oil from a non-analogous reference (Boyer et al.) does not provide the needed claim limitation for this 35 U.S.C. § 103(a) rejection.

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 18

d. There is no Suggestion or Motivation to Combine Johnson et al. and Boyer et al.

Even if the Examiner is correct in the assumption that "it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Johnson et al. to use an enamel base comprising a bituminous and a petroleum base as taught by Boyer et al." (Office Action, page 4), Applicant respectfully submits that the Examiner fails to establish a *prima facie* case of obviousness because no motivation or suggestion exists to replace the coal tar oil of the Johnson et al. enamel formulation with the cut-back oil of the Boyer et al. sealer formulation. To establish *prima facie* obviousness, "there must be some suggestion or motivation, in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine teachings." MPEP §2143; *see also In re Dance*, 160 F.3d 1339, 1343 (Fed. Cir. 1998); *Heidelberger Druckmaschinen v. Hantscho Commercial*, 21 F.3d 1068, 1072 (Fed. Cir. 1994); *In re Geiger*, 815 F.2d 686, 688 (Fed. Cir. 1987); *Lindemann Maschinenfabrik v. Am Hoist and Derrick*, 730 F.2d 1452, 1462 (Fed. Cir. 1984). The suggestion to make the claimed combination *must come from the prior art and not from the applicant's disclosure or from the level of skill of the art*. *Id.* (citing *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991)); MPEP §2143.01 (citing *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999)). "It is insufficient to establish obviousness that the separate elements of the invention existed in the prior art, absent some teaching or suggestion, in the prior art, to combine the elements." *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 957 (Fed. Cir. 1997). The fact that references can be modified or combined is insufficient to meet this criterion. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998); *In re Mills*, 916 F.2d 680, 682 (Fed. Cir. 1990).

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 19

Moreover, the fact that the modification or combination would be well within the ordinary skill in the art, by itself, is insufficient to meet this criterion. *Al-Site Corp. v. VSI Intern., Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999); *Ex parte Levengood*, 28 U.S.P.Q.2d 1300, 1302 (Bd. Pat. App. & Inter. 1993). To be motivated to combine the references, one skilled in the art, without the teaching of the Applicant's disclosure, would have to look at Johnson et al. and Boyer et al. and determine that some benefit would result from including the cut-back oil of the Boyer et al. sealer formulation in the formulation containing coal tar pitch, coal tar oil, and coal, as disclosed in the Johnson et al. enamel formulation.

Applicant respectfully submits that nothing in Boyer et al. discusses or suggests that its sealer formulation with the cut-back oil provides any advantages over other enamel formulations known in the prior art. Johnson et al. discloses an enamel formulation comprising coal tar pitch, coal tar oil, and coal. As previously discussed, these three ingredients of Johnson et al. are all of the same "family," namely coal or coal by-products. Applicant respectfully submits that nothing in Johnson et al. discusses or suggests an enamel formulation comprising ingredients of the coal "family" and a petroleum or petroleum-based ingredient. Applicant respectfully submits that if Johnson et al. itself does not discuss the use of a cut-back oil as disclosed in Boyer et al., then it could not be possible for one of ordinary skill to find any suggestion or motivation from the references to replace the coal tar oil of Johnson et al. with the cut-back oil of Boyer et al.. Additionally, Boyer et al. *teaches away* the use of coal tar, stating that "[p]referably, the sealer base, and the finished driveway sealer material, will be coal tar free because small amounts of coal tar increase the toxicity of the material and make it difficult to sell in restricted area.

Commissioner for Patents

Serial No. 10/700,184

Response Date January 6, 2006

Reply to Office Action dated October 7, 2005

Page 20

Petroleum pitch is believed to be less toxic than coal tar pitch and is preferred." (Col. 8, lines 29-33) One of ordinary skill would have no reason to combine the enamel formulations of Johnson et al. with the sealer formulations of Boyer et al. without a minimal level of teaching or discussion of the benefit of the cut-back oil in Boyer et al., because one of ordinary skill in the art would not realize any significance of using the cut-back oil in a formulation comprising coal and coal by-products as disclosed in Johnson et al.

In addition, and as discussed below in further detail, Johnson et al. discloses a coal tar "enamel" and Boyer et al. discloses a "sealer," and Applicant respectfully submits that an "enamel" is a significantly different product than a "sealer." There is no motivation or suggestion in either Johnson et al. or Boyer et al. to combine an ingredient or ingredients of an "enamel" with an ingredient or ingredients of a "sealer." It is respectfully submitted that neither Johnson et al. nor Boyer et al. provide such a motivation because neither reference discusses, refers to, or even mentions any combination of elements of an enamel and of a sealer.

Accordingly, Applicant respectfully submits that the rejection of claims 1 and 9 under 35 U.S.C. § 103(a) should be withdrawn, as Johnson et al. and Boyer et al. do not teach or suggest all of the claim limitations of the present invention, and there is no motivation to combine the teachings of Johnson et al. and Boyer et al. Moreover, Applicant respectfully submits that the rejection of claims 2-7 and 10-19 under 35 U.S.C. §103(a) should also be withdrawn because they depend from and incorporate all the limitations of allowable base claims 1 and 9.

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 21

e. Boyer et al. is Non-Analogous Art

In the event that the Examiner proceeds to include Boyer et al. in any future rejection of the claims of the present Application, Applicant respectfully brings to the Examiner's attention the fact that Boyer et al. is non-analogous art. A reference is non-analogous art if: (i) the reference is not "within the field of the inventor's endeavor", and (ii) the reference is not reasonably pertinent to the particular problem with which the inventor was involved. *See In re Deminski*, 796 F.2d 436 (C.A.F.C. 1986).

1. Boyer is Not Within the Field of the Present Invention

With regard to the first prong of this test, Boyer et al. is not within the field of the present invention. Boyer et al. relates to a *sealer* made from SDA asphalt. Applicant respectfully submits that it is clear from the following references in Boyer et al. that Boyer et al. teaches a *sealer* and not an *enamel* as taught by the present Application (emphases added below):

- "Accordingly, the present invention provides a method of making a binder or **sealer** base..." (col. 2, lines 52-53)
- "In another embodiment the present invention provides driveway **sealer** emulsion of water, clay, and **sealer** base..." (col. 2, lines 60-61)
- "Driveway **sealer** means a driveway or paving **sealer** comprising: water, clay, emulsifier and "**sealer** base" or "binder"..." (col. 3, lines 3-8)

The clear teaching of a "sealer" in Boyer et al. is important here as a "sealer" is technically different and distinct from an "enamel" as taught in the present Application. The two relevant standardized specifications for coal tar based driveway sealers (as taught by Boyer et al.) are American Society of Testing and Materials (ASTM) Designation: D 5727-95 ("Standard Specification for Emulsified Refined Coal Tar (Mineral Colloid Type)"), and ASTM

Commissioner for Patents

Serial No. 10/700,184

Response Date January 6, 2006

Reply to Office Action dated October 7, 2005

Page 22

Designation: D 3320-90 ("Standard Specification for Emulsified Coal-Tar Pitch (Mineral Colloid Type)"). ASTM D 5727-95 is the specification that "covers mineral-colloid-stabilized, concentrated, emulsified, refined coal tar suitable for use as weather-protective and aliphatic-solvent resistant coatings over bituminous pavements such as those found at airports, parking areas, and driveways" (section 1.1). ASTM D 3320-90 is the specification that "covers mineral-colloid-stabilized, emulsified coal-tar pitch suitable for use as a weather-protective and aliphatic-solvent resistant coating over bituminous pavements of airports, parking areas, and driveways" (section 1.1). Additionally, the relevant standardized specification for asphalt based emulsions to coat metal (also as taught by Boyer et al.) is ASTM Designation: D 1187-97 ("Standard Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal").

Conversely, coal tar enamels used for pipe coatings, as taught by the present Application, are based on different formulations, chemistry, and standards than those disclosed in Boyer et al.. The two relevant standardized specifications for coal tar enamel coatings are American National Standards Institute/American Water Works Association (ANSI/AWWA) Standard C203-02 ("COAL-TAR PROTECTIVE COATINGS AND LININGS FOR STEEL WATER PIPELINES – ENAMEL AND TAPE – HOT APPLIED") and National Association of Corrosion Engineers (NACE) Standard RP0602-2002 ("Field-Applied Coal Tar Enamel Pipe Coating Systems: Application, Performance, and Quality Control").

Applicant respectfully submits that the standards for coal-tar and asphalt sealers are different from the standards of coal-tar enamel coatings, and as such, the invention of Boyer et al. is different from and not analogous to the teachings of the present Application. Table 1 of

Commissioner for Patents

Serial No. 10/700,184

Response Date January 6, 2006

Reply to Office Action dated October 7, 2005

Page 23

ASTM D 5727-95, Table 1 of ASTM D 3320-90, and Table 2 of ASTM D 1187-97 each provide specific physical property and performance requirements of coal-tar and asphalt *sealers*, while Table 1 of ANSI/AWWA C203-02 and Section 5 of NACE RP0602-2002 each provide physical and coating properties of coal-tar *enamel* coatings. Applicant respectfully submits that the standards for coal-tar and asphalt sealers are different from the standards for coal-tar enamel coatings because coal-tar and asphalt sealers are different types of products than coal-tar enamel coatings. The present Application deals with coal-tar enamels, and Boyer et al. is not within the field of enamels; instead, Boyer et al. is in the field of coal-tar sealers.

Additionally, Applicant respectfully submits that Boyer et al. is not within the field of coal-based enamels as Boyer et al. specifically teaches a sealer base from "solvent deasphalted asphalt" (col. 2, lines 53-54). As previously discussed, Boyer et al. states that "[t]here are two basic types of driveway or pavement sealer – coal tar based and asphalt based" (col. 1, lines 15-16). Applicant respectfully submits that Boyer et al. not only differentiates between coal tar based sealers and asphalt based sealers, but also specifically teaches asphalt based products over coal-tar based products. Applicant respectfully submits that Boyer et al. should be considered non-analogous art to the present Application for this reason as well.

2. Boyer is Not Reasonably Pertinent to the Particular Problem With Which the Present Invention was Involved

With regard to the second prong of this test, Boyer et al. is not reasonably pertinent to the particular problem with which the present invention was involved. The purposes of both the invention and the prior art are important in determining whether the reference is reasonably

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 24

pertinent to the problem the invention attempts to solve. *In re Deminski*, 796 F.2d 436 (C.A.F.C. 1986). If a reference disclosure is directed to a different purpose, one skilled in the art will have little motivation or occasion to consider it. *Id.*

The present invention is concerned with the creation of a coal-based *enamel* for the coating of metal. The present Application states that "increasing environmental limitations on emissions from manufacturing facilities where coal tar enamels are produced and used and concern for the environment where coated articles are placed, have created an increased sensitivity to the level of [polyaromatic hydrocarbons, PAHs] in coal tar products" (Application, paragraph 0003). Given this background, the inventor focused on the "need for new tar-based enamels having the desirable coating properties of a bituminous or coal tar enamel but requiring less coal tar-based raw materials" (Application, paragraph 0003). Such enamels may then be used "to form hybrid coatings for metal articles to waterproof and protect the coated surface from corrosion" (Application, paragraph 0001).

Conversely, Boyer et al. is concerned with *sealers* for driveway applications. Boyer et al. states "[w]e wanted to see if acceptable driveway sealers could be made from SDA asphalts" and that "[t]his would permit a better use of the SDA asphalt and permit production of a low cost driveway sealer with acceptable properties" (col. 2, lines 37-40). In fact, each of the six claims of Boyer et al. refer to either a "driveway sealer" or a "driveway sealer emulsion" (col. 12, lines 23-64).

Thus, Applicant's disclosure and the Boyer et al. disclosure are directed to different purposes and attempt to solve totally different problems. Because of this, no motivation exists

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 25

for one skilled in the art of coal-based enamels to even consider Boyer et al. when considering the problems solved by the present invention. Applicant respectfully submits that coal, a main ingredient of the enamel in the present Application, is not even used in the non-analogous sealer disclosed in Boyer et al. Boyer et al. is simply not pertinent to the problem solved by the present invention. Therefore, because Boyer et al. is not "within the field of the inventor's endeavor", and (ii) are not reasonably pertinent to the particular problem which the present invention solves, Boyer et al. is non-analogous prior art.

VI. The Rejection of Claims 3 and 10 under 35 U.S.C. § 103(a) as Allegedly Being Unpatentable Over Johnson et al. and Further in View of IDS Mirtchi Should be Withdrawn

In the Office Action, the Examiner rejected claims 3 and 10 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson et al. and further in view of IDS Mirtchi. Applicant respectfully submits that, as discussed above, it believes claims 1 and 9 to be patentable over the prior art, and as such, Applicant respectfully submits that claims 3 and 10 are also patentable as ultimately being dependent upon allowable claims 1 and 9, respectively. Accordingly Applicant respectfully submits that the rejection of claims 3 and 10 under 35 U.S.C. § 103(a) should be withdrawn.

VII. The Rejection of Claims 3 and 10 under 35 U.S.C. § 103(a) as Allegedly Being Unpatentable Over Johnson et al. in View of Boyer et al. and Further in View of IDS Mirtchi Should be Withdrawn

In the Office Action, the Examiner rejected claims 3 and 10 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson et al. in view of Boyer et al. and further in view of

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 26

IDS Mirtchi. Applicant respectfully submits that, as discussed above, it believes claims 1 and 9 to be patentable over the prior art, and as such, Applicant respectfully submits that claims 3 and 10 are also patentable as ultimately being dependent upon allowable claims 1 and 9, respectively. Accordingly Applicant respectfully submits that the rejection of claims 3 and 10 under 35 U.S.C. § 103(a) should be withdrawn.

VIII. The Rejection of Claim 8 under 35 U.S.C. § 103(a) as Allegedly Being Unpatentable Over Johnson et al. in View of Boyer et al. and Further in View of Pennie Should be Withdrawn

In the Office Action, the Examiner rejected claim 8 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson et al. in view of Boyer et al. and further in view of Pennie. Applicant respectfully submits that, as discussed above, it believes claim 1 to be patentable over the prior art, and as such, Applicant respectfully submits that claims 8 is also patentable as ultimately being dependent upon allowable claim 1. Accordingly Applicant respectfully submits that the rejection of claim 8 under 35 U.S.C. § 103(a) should be withdrawn.

CONCLUSION

For all the foregoing reasons, it is respectfully submitted that the Applicant has made a patentable contribution to the art and that this response places the above-identified Application in condition for allowance. Favorable reconsideration and allowance of this Application is respectfully requested. Applicant believes that no additional fee is required for the submission of this Response. However, in the event the Applicant has inadvertently overlooked the need for an extension of time or payment of an additional fee, the Applicant conditionally petitions therefor,

Commissioner for Patents
Serial No. 10/700,184
Response Date January 6, 2006
Reply to Office Action dated October 7, 2005
Page 27

and authorize any fee deficiency to be charged to deposit account 09-0007. When doing so, please reference the above-listed docket number.

Sincerely,

ICE MILLER LLP



Mark C. Reichel
Attorney Registration No. 53,509

ICE MILLER LLP
One American Square, Suite 3100
Indianapolis, Indiana 46282-0200
Telephone: (317) 236-5882
Facsimile: (317) 592-5453

Date: January 6, 2006

MCR/lbh
Enclosures: Form PTO/SB/08b
Cited References (6)
Return Postcard